II

108TH CONGRESS
2D SESSION

# S. 2620

To provide for the establishment of an Office of High-Performance Green Buildings, and for other purposes.

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IN THE SENATE OF THE UNITED STATES

JULY 8, 2004

Mr. JEFFORDS (for himself, Mr. LAUTENBERG, Mr. REID, Mr. WYDEN, Mr. CARPER, Mr. HARKIN, Mr. LEAHY, and Mrs. CLINTON) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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# A BILL

To provide for the establishment of an Office of High-Performance Green Buildings, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

**SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

(a) SHORT TITLE.—This Act may be cited as the ''High-Performance Green Buildings Act''.

(b) TABLE OF CONTENTS.—The table of contents of this Act is as follows:

**SEC. 2. FINDINGS.**

Congress finds that—

(1) buildings have profound impacts on the environment, energy use, and health of individuals, and numerous studies suggest that building environments affect worker productivity;

(2) buildings in the United States consume 37 percent of the energy, 68 percent of the electricity, and 12 percent of the potable water used in the United States, and overall construction of buildings (including construction of related infrastructure) consumes 60 percent of all raw materials used in the economy of the United States (excluding materials used for food or fuel);

(3) in the United States, buildings generate—

(A) 40 percent of the nonindustrial waste stream;

(B) 31 percent of the mercury in municipal solid waste; and

(C) 35 percent of the carbon dioxide (the primary greenhouse gas associated with climate change), 49 percent of the sulfur dioxide, and 25 percent of the nitrogen oxides found in the air;

(4) buildings contribute to the ''heat island effect'' by eliminating vegetative cover and using paving and roofing materials that absorb heat and raise ambient temperatures, accelerating the reaction that forms ground-level ozone;

(5) according to the Environmental Protection Agency, on average, people in the United States spend approximately 90 percent of their time indoors, where the concentration of pollutants may be 2 to 5 times and, in some cases, 100 times, higher than pollution concentrations in outdoor air;

(6) the Centers for Disease Control and the Environmental Protection Agency have connected poor indoor air quality to significantly elevated rates of mortality;

(7) health impacts from building materials, such as adhesives, paints, carpeting, and pressed-wood products, which may emit pollutants such as formaldehyde or other volatile organic compounds, are still uncertain but are believed to be potentially significant;

(8) according to the Building Owners and Managers Association, because costs relating to employees, at $130 per square foot annually (including health insurance costs), are by far the highest business costs of a building, as opposed to total energy costs at $1.81 per square foot, measures to improve the indoor air quality of a building can be an important investment in reducing long-term employee costs;

(9) the use of energy efficient systems and alternative sources of energy—

(A) reduces building costs; and

(B) improves the security of the United States by ensuring continuing operations despite any potential interruptions in the primary energy supply of the United States as a result of terrorism or other disruptions of the electricity grid;

(10) by integrating issues relating to natural resource use, human health, materials use, transportation needs, and other concerns into planning the life cycle of a building, architects, designers, and developers can construct buildings that—

(A) are healthier for occupants;

(B) reduce environmental impacts; and

(C) are less wasteful of resources;

(11) a well-designed high-performance green building can be less expensive to build and operate throughout the lifetime of the building than a building that is not a high-performance green building;

(12) in 2003, in the document entitled ''The Federal Commitment to Green Building: Experiences and Expectations'', the Office of the Federal Environmental Executive found that ''[t]here is a mixture of diverse Federal green building mandates in law, regulation, and Executive Orders, but not one definitive, clear, and unified policy statement on environmental design. Many within the Federal government are working on green buildings, but additional coordination and integration are needed.'';

(13) a central coordinating Federal authority for green buildings would increase efficiency of, im-

prove communication between, and reduce duplication within green building programs; and

(14) the General Services Administration, as the largest civilian landlord in the United States, managing more than 8,300 buildings owned or leased by the United States, is the appropriate agency to provide Federal agency coordination of green building programs.

**SEC. 3. DEFINITIONS.**

In this Act:

(1) ADMINISTRATOR.—The term ''Administrator'' means the Administrator of General Services.

(2) COMMITTEE.—The term ''Committee'' means the steering committee established under section 103(a).

(3) HIGH-PERFORMANCE GREEN BUILDING.—The term ''high-performance green building'' means a building the life cycle of which—

(A) increases the efficiency with which the building—

(i) reduces energy, water, and material resource use;

(ii) improves indoor environmental quality, reduces indoor pollution, improves

thermal comfort, and improves lighting and noise environments that affect occupant health and productivity;

(iii) reduces negative impacts on the environment throughout the life cycle of the building, including air and water pollution and waste generation;

(iv) increases the use of environmentally preferable products, including biobased, recycled content, and nontoxic products with lower life-cycle impacts;

(v) reduces the negative impacts of emissions under the Clean Air Act (42 U.S.C. 7401 et seq.);

(vi) integrates systems in the building; and

(vii) reduces the environmental impacts of transportation through building location and site design that support a full range of transportation choices for users of the building;

(B) considers indoor and outdoor impacts of the building on human health and the environment, including—

(i) improvements in worker productivity;

(ii) the life-cycle impacts of building materials and operations; and

(iii) other factors that the Office considers to be appropriate.

(4) HIGH-PERFORMANCE SCHOOL.—The term ''high-performance school'' has the meaning given the term ''healthy, high-performance school building'' in section 5586 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7277e).

(5) LIFE CYCLE.—The term ''life cycle'', with respect to a high-performance green building, means all stages of the useful life of the high-performance green building (including components, equipment, systems, and controls of the building) beginning at conception of a green building project and continuing through siting, design, construction, landscaping, commissioning, operation, maintenance, renovation, deconstruction, and removal of the green building.

(6) LIFE CYCLE ASSESSMENT.—The term ''life cycle assessment'' means a comprehensive system approach for measuring the environmental perform-

ance of a product or service that includes an analysis of the environmental impacts of—

(A) each stage in the life of the product or service (including acquisition of raw materials, product manufacture, transportation, installation, operation and maintenance, and waste management); and

(B) each component of the product or service.

(7) LIFE-CYCLE COSTING.—The term ''life-cycle costing'', with respect to a high-performance green building, means an analysis of economic costs of impacts and choices made regarding materials used and activities carried out with respect to the life cycle of the high-performance green building.

(8) LOCAL EDUCATIONAL AGENCY.—The term ''local educational agency'' has the meaning given the term in section 9101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801).

(9) OFFICE.—The term ''Office'' means the Office of High-Performance Green Buildings established under section 102(a).

# TITLE I—OFFICE OF HIGH-PERFORMANCE GREEN BUILDINGS

**SEC. 101. OVERSIGHT.**

(a) IN GENERAL.—The Administrator shall establish within the General Services Administration, and appoint an appropriate individual to, a position in the career-reserved Senior Executive service to—

(1) establish and oversee the Office of High-Performance Green Buildings in accordance with section 102; and

(2) carry out other duties as required under this Act.

(b) COMPENSATION.—The compensation of the individual appointed under subsection (a) shall not exceed the maximum rate of basic pay for the Senior Executive Service under section 5382 of title 5, United States Code, including any applicable locality-based comparability payment that may be authorized under section 5304(h)(2)(C) of that title.

**SEC. 102. OFFICE OF HIGH-PERFORMANCE GREEN BUILDINGS.**

(a) ESTABLISHMENT.—The individual appointed under section 101(a), in partnership with the Administrator of the Environmental Protection Agency, the Office

of the Federal Environmental Executive, the Secretary of Energy, the Secretary of Commerce, the Secretary of Defense, the Secretary of Homeland Security, the Secretary of Health and Human Services, the Director of the Office of Management and Budget, and heads of other relevant Federal agencies, shall establish within the General Services Administration an Office of High-Performance Green Buildings.

(b) DUTIES.—The Office shall—

(1) ensure full coordination and collaboration with all relevant agencies;

(2) establish a senior-level Federal interagency steering committee in accordance with section 103;

(3) provide information through—

(A) outreach;

(B) education;

(C) the provision of technical assistance; and

(D) the development of a national high-performance green building clearinghouse in accordance with section 104;

(4) provide for research and development relating to high-performance green building initiatives under section 105(a);

(5) in partnership with the Comptroller General, review and analyze budget and life-cycle costing issues in accordance with section 106;

(6) complete and submit a report in accordance with subsection (c); and

(7) carry out implementation plans described in subsection (d).

(c) REPORT.—Not later than 2 years after the date of enactment of this Act, and biennially thereafter, the Office shall submit to Congress and the Comptroller General a report that—

(1) describes the status of the implementation of programs under this Act and other Federal programs in effect as of the date of the report, including—

(A) the extent to which the programs are being carried out in accordance with this Act; and

(B) the status of funding requests and appropriations for those programs;

(2) identifies steps within the planning, budgeting, and construction process of Federal facilities that inhibit new and existing Federal facilities from becoming high-performance green buildings, as measured by—

(A) a silver rating, as defined by the Leadership in Energy and Environmental Design Building Rating System standard established by the United States Green Building Council; or

(B) an improved or higher rating standard as identified, and reassessed biannually, by the Committee;

(3) identifies inconsistency of Federal agencies with Federal law in product acquisition guidelines and high-performance product guidelines;

(4) recommends language for uniform standards for use by Federal agencies in environmentally responsible acquisition; and

(5) includes, for the 2-year period covered by the report, recommendations to address each of the matters, and a plan and deadline for implementation of each of the recommendations, described in paragraphs (1) through (4).

(d) IMPLEMENTATION PLAN.—The Office, in consultation with the Comptroller General, shall carry out each plan for implementation of recommendations under subsection (c)(5).

**SEC. 103. INTERAGENCY STEERING COMMITTEE.**

(a) ESTABLISHMENT.—Not later than 180 days after the date of enactment of this Act, the Office shall establish within the Office a steering committee.

(b) MEMBERSHIP.—The Committee shall be composed of representatives of, at a minimum—

(1) each agency referred to in section 102(a);

(2) State and local governments;

(3) nongovernmental organizations, including the United States Green Building Council, the American Council for an Energy-Efficient Economy, and the Rocky Mountain Institute;

(4) building design, development, and finance sectors in the private sector; and

(5) building owners, developers, and equipment manufacturers, including renewable, control, combined heat and power, and other relevant technologies, as determined by the Office.

(c) DUTIES.—The Committee shall—

(1) assess Federal activities and compliance with Federal law applicable to high-performance green buildings;

(2) make recommendations for expansion of existing efforts and development of new efforts to support activities relating to the life cycles of high-performance green buildings by the Federal Govern-

ment, including consideration of the benefits to national security and implementation of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.);

(3) evaluate current high-performance green building standards and recommend improved, higher, or supplemental rating standards, as necessary, that are consistent with the responsibilities of the Federal Government under this Act and other applicable law; and

(4) provide to the individual appointed under section 101(a) such recommendations relating to Federal activities carried out under sections 104 through 106 as are agreed to by a majority of the members of the Committee.

**SEC. 104. PUBLIC OUTREACH.**

(a) ESTABLISHMENT.—The Office, in close coordination with Federal agencies and departments that perform related functions, shall carry out public outreach—

(1) to inform individuals and entities in the public sector, including the Federal Government, of the information and services available through the Office; and

(2) to determine how to most effectively deliver that information to the individuals and entities.

(b) DUTIES.—In carrying out this section, the Office, in close cooperation with Federal agencies and departments that perform related functions, shall—

(1) establish and maintain a national high-performance green building clearinghouse on the Internet that—

(A) coordinates and enhances existing similar efforts; and

(B) provides information relating to high-performance green buildings, including—

(i) information on, and hyperlinks to Internet sites that describe, the activities of the Federal Government;

(ii) hyperlinks to Internet sites relating to—

(I) State and local governments;

(II) the private sector; and

(III) international activities; and

(iii) information on the exposure of children to environmental hazards in school facilities, as provided by the Administrator of the Environmental Protection Agency;

(2) develop clear guidance and educational materials for use by Federal agencies in implementing high-performance green building practices;

(3) develop and conduct training sessions with budget specialists and contracting personnel from Federal agencies and budget examiners to apply life-cycle cost criteria to actual projects;

(4) provide technical assistance on methods of using tools and resources to make more cost-effective, health protective, and environmentally beneficial decisions for constructing high-performance green buildings;

(5) assist all branches of government at the Federal, State, and local levels, and any other interested entity, by providing information on relevant application processes for certifying a high-performance green building, including certification and commissioning;

(6) assist interested persons, communities, businesses, and branches of government with technical information, technical assistance, market research, or other forms of assistance, information, or advice that would be useful in planning and constructing high-performance green buildings, particularly with respect to tools available to conduct life-cycle cost assessment;

(7) provide technical training and guidance on high-performance green buildings; and

(8) obtain such information from other Federal offices, agencies and departments as is necessary to carry out this Act.

**SEC. 105. RESEARCH AND DEVELOPMENT.**

(a) ESTABLISHMENT.—The Office shall carry out research and development—

(1) to survey and coordinate existing research and studies;

(2) to recommend new areas for research; and

(3) to promote the development and dissemination of high performance green building tools.

(b) DUTIES.—In carrying out this section, the Office shall—

(1) ensure interagency coordination of relevant research;

(2) develop and direct a Federal high-performance green building research plan that identifies information needs and research that should be addressed and provides measurement tools—

(A) to quantify the relationships between human health and occupant productivity and each of—

(i) pollutant emissions from materials and products in the building;

(ii) natural day lighting;

(iii) ventilation choices and technologies;

(iv) heating and cooling choices and technologies;

(v) moisture control and mold;

(vi) maintenance, cleaning, and pest control activities;

(vii) acoustics; and

(viii) other issues relating to the health, comfort, productivity, and performance of occupants of the building;

(B) to monitor and assess the life-cycle performance of public facilities (including demonstration projects) built as high-performance green buildings, including through consideration of the report required under section 401(b)(1)(D); and

(C) to quantify, review, and standardize techniques for use in performing life cycle assessments;

(3) assist the budget and life-cycle costing functions of the Office under section 106 in the development and implementation of performance-based standards and life-cycle cost measures, including the development of performance measure tools and soft-

ware for use by Federal agencies and other interested entities; and

(4) support other research initiatives determined by the Office to contribute to mainstreaming of high-performance planning, design, construction, and operation and management of buildings.

**SEC. 106. BUDGET AND LIFE-CYCLE COSTING.**

(a) ESTABLISHMENT.—The Office, in coordination with the Office of Management and Budget and relevant agencies, shall carry out budget and life-cycle costing for green buildings.

(b) DUTIES.—In carrying out this section, the Office shall—

(1) consult, as necessary, the report of the Office of the Federal Environmental Executive entitled ''The Federal Commitment to Buildings: Experiences and Expectations'' and dated September 2003;

(2) be responsible for—

(A) examining policy of the Office of Management and Budget relating to life-cycle costing for Federal capital investments;

(B) assisting in the development of clear guidance and implementation of life-cycle cost policy with budget offices of other Federal

agencies by establishing a consistent standard of life-cycle cost practices for Federal agencies;

(C) identifying tools that could support the use of life-cycle costing to assist sound Federal budget decisionmaking; and

(D) examining—

(i) the practicability of linking high performance green building life cycle stages with Federal budgets;

(ii) the effect that such a link would have in reducing barriers to the construction of high-performance green buildings and renovation of existing buildings; and

(iii) means by which to incorporate the short-term and long-term cost savings that accrue from high-performance green buildings.

**SEC. 107. AUTHORIZATION OF APPROPRIATIONS.**

There are authorized to be appropriated to carry out this title $2,000,000 for each of fiscal years 2005 through 2010.

# TITLE II—HEALTHY HIGH-PERFORMANCE SCHOOLS

**SEC. 201. GRANTS FOR SCHOOLS.**

(a) IN GENERAL.—The Administrator of the Environmental Protection Agency may provide grants to State educational agencies and local educational agencies for use in—

(1) providing intensive technical assistance for and assisting the implementation of the Tools for Schools Program of the Environmental Protection Agency; and

(2) development of State-level school environmental quality plans, in partnership with the Environmental Protection Agency, that may include—

(A) standards for school building design, construction, and renovation;

(B) identification of ongoing school building environmental problems in the State;

(C) proposals for the systematic improvement (including benchmarks and timelines) of environmental conditions in schools throughout the State, including with respect to—

(i) school building siting, construction, and maintenance;

(ii) indoor air quality;

(iii) pest control;

(iv) radon contamination;

(v) lead contamination;

(vi) environmentally preferable purchasing of products for instruction and maintenance;

(vii) hazard identification and remediation; and

(viii) maximization of transportation choices for students, staff, and other members of the community; and

(D) recommendations for improvements in the capacity of the State to track child and adult health complaints relating to schools.

(b) COST SHARING.—

(1) FEDERAL SHARE.—The Federal share of the cost of a project or activity carried out using funds from a grant under subsection (a) shall not exceed 90 percent.

(2) NON-FEDERAL SHARE.—The non-Federal share of the cost of a project or activity carried out using funds from a grant under subsection (a) may be provided in the form of cash or in-kind goods and services, including goods and services used to create prototypical designs.

(c) GRANT PRIORITY.—

(1) IN GENERAL.—In providing grants under this section for use in carrying out the program referred to in subsection (a)(1), the Administrator of the Environmental Protection Agency shall give priority to school districts that have a demonstrated need for environmental improvement.

(2) RESPONSIBILITY OF SCHOOL DISTRICTS AND STATE EDUCATIONAL AGENCIES.—

(A) SCHOOL DISTRICTS.—Not later than 2 years after the date of enactment of this Act, and annually thereafter, each school district that receives funds from the Administrator of the Environmental Protection Agency to carry out a program described in subsection (a) shall submit to the State educational agency with jurisdiction over the school district a report that includes—

(i) a list of schools in the districts that, as of the date of the report, have accepted funds or other assistance from the Environmental Protection Agency for use in carrying out this section; and

(ii) an evaluation of the impact of the funds, including—

(I) general data regarding measures of student health and attendance rates before and after the intervention; and

(II) descriptions of toxic or hazardous cleaning, maintenance, or instructional products eliminated or reduced in use as part of the promotion or remediation of the indoor air quality of schools within the school district; and

(iii) basic information on the potential influence of other factors (such as the installation of carpet and HVAC systems and similar activities) on air quality.

(B) STATE EDUCATIONAL AGENCY REPORTS.—Not later than 180 days after the date on which each State educational agency has received the annual reports under subparagraph (A) from all participating school districts, the State educational agency shall submit to the Administrator of the Environmental Protection Agency and Congress a consolidated report of all information received from the school districts.

**SEC. 202. FEDERAL GUIDELINES FOR SITING OF SCHOOL FACILITIES.**

(a) IN GENERAL.—Using as a model guidelines such as those of the ''Child Proofing Our Communities'' School Siting Committee of the State of California, the Administrator of the Environmental Protection Agency shall develop school site acquisition guidelines.

(b) VULNERABILITY.—The guidelines should contain an analysis of means by which to account for the special vulnerability of children to chemical exposures in any case in which the potential for contamination at a potential school site is assessed.

(c) ACCESSIBILITY.—The guidelines shall include an analysis of means by which to maximize transportation choices for students, staff, and other members of the community.

**SEC. 203. EDUCATION RESEARCH PROGRAM.**

The Administrator of the Environmental Protection Agency, in partnership with the Secretary of Education, shall carry out an education research program that—

(1) describes the status and findings of Federal research initiatives established under this Act and other Federal law with respect to education, including relevant updates on trends in the field, such as the impact of school facility environments on—

(A) student and staff health, safety, and productivity;

(B) students with disabilities or special needs; and

(C) student learning capacity;

(2) provides technical assistance on siting, design, management, and operation of school facilities, including facilities used by students with disabilities or special needs;

(3) once the relevant metrics have been identified or developed in accordance with section 105, quantifies the relationships between—

(A) human health, occupant productivity, and student performance; and

(B) with respect to school facilities, each of—

(i) pollutant emissions from materials and products;

(ii) natural day lighting;

(iii) ventilation choices and technologies;

(iv) heating and cooling choices and technologies;

(v) moisture control and mold;

(vi) maintenance, cleaning, and pest control activities;

(vii) acoustics; and

(viii) other issues relating to the health, comfort, productivity, and performance of occupants of the school facilities;

(4) cooperates with federally funded pediatric environmental health research centers to assist in on-site school environmental investigations;

(5) assists States and State entities in better understanding and improving the environmental health of children; and

(6) provides to the Office a biennial report of all activities carried out under this section.

**SEC. 204. AUTHORIZATION OF APPROPRIATIONS.**

There is authorized to be appropriated to carry out this title $10,000,000 for the period of fiscal years 2005 through 2010.

# TITLE III—STRENGTHENING FEDERAL LEADERSHIP

**SEC. 301. GENERAL ACCOUNTING OFFICE.**

(a) RESTRUCTURING OF CAPITAL BUDGETS.—Not later than 180 days after the date of submission of the report under 102(c), the Comptroller General shall—

(1) review the current budget process; and

(2) develop and submit to Congress an implementation plan for life-cycle costing that—

(A) identifies and incorporates the short-term and long-term cost savings that accrue from high-performance green buildings; and

(B) includes recommendations for—

(i) restructuring of budgets to require the use of complete energy- and environmental-cost accounting;

(ii) the use of operations expenditures in budget-related decisions while simultaneously incorporating productivity and health measures (as those measures can be quantified by the Office, with the assistance of universities and national laboratories); and

(iii) means by which Federal agencies may be permitted to retain and reuse all identified savings accrued as a result of the use of high-performance life cycle costing for future high-performance green building initiatives.

(b) AUDITS.—The Comptroller General may conduct periodic audits of a Federal project over the life of the project to inspect whether—

(1) the design stage of high performance green building measures were achieved; and

(2) the high performance building data were collected and reported to the Office.

# TITLE IV—DEMONSTRATION PROJECT

**SEC. 401. COORDINATION OF GOALS.**

(a) IN GENERAL.—The Office shall establish guidelines for a demonstration project conducted as a public-private partnership to contribute to the research goals of the Office.

(b) PROJECTS.—In accordance with guidelines established by the Office under subsection (a) and the duties of the Office described in section 101(b), the individual appointed under section 101(a) shall carry out—

(1) for each of fiscal years 2005 through 2008, a demonstration project, in a Federal building selected by the Office in accordance with the criteria described in subsection (c)(1), that—

(A) provides for the evaluation and, as practicable, use of the information obtained through the conduct of projects and activities under this Act;

(B) requires at least 1 project or activity referred to in subparagraph (A) to achieve a

platinum rating, as defined by the Leadership in Energy and Environmental Design Building Rating System standard established by the United States Green Building Council (or equivalent rating), for each fiscal year; and

(C) requires the submission to the Office of an annual report describing recommendations for the use of information gathered as a result of programs carried out under this Act; and

(2) a demonstration project involving at least 4 universities, that, as determined by the Office in accordance with subsection (c)(2), have appropriate research capability and relevant projects to meet the goals of the demonstration project established by the Office.

(c) CRITERIA.—

(1) FEDERAL BUILDINGS.—With respect to the Federal building at which a demonstration project under this section is conducted, the Federal building shall—

(A) be an appropriate model for a project involving—

(i) location and design that promote access to the Federal building through walking, biking, and mass transit;

(ii) construction or renovation to meet high indoor environmental criteria;

(iii) deployment, and assessment of effectiveness, of high performance technologies;

(iv) analysis of life cycles of all materials, components, and systems in the building; and

(v) assessment of beneficial impacts on public health and the health of individuals that enter or work in the building; and

(B) possess sufficient technological and organizational adaptability.

(2) UNIVERSITIES.—With respect to the 4 universities at which a demonstration project under this section is conducted—

(A) the universities should be selected based on—

(i) successful and established public-private research and development partnerships;

(ii) demonstrated capabilities to construct or renovate buildings that meet high indoor environmental qualities;

(iii) organizational flexibility;

(iv) technological adaptability;

(v) energy and environmental effectiveness throughout the life cycles of all materials, components, and systems deployed within the building; and

(vi) the demonstrated capacity of at least 1 university to replicate lessons learned among nearby or sister universities, preferably by participation in groups or consortia that promote sustainability;

(B) each university shall be located in a different climatic region of the United States, each of which regions shall have, as determined by the Office—

(i) a hot, dry climate;

(ii) a hot, humid climate;

(iii) a cold climate; or

(iv) a mild climate;

(C) each university shall agree that the focuses of the project shall be—

(i) the effectiveness of various high performance technologies in each of the 4 climatic regions of the United States described in subparagraph (B);

(ii) the identification of the most effective ways to use high performance building and landscape technologies to engage and educate undergraduate and graduate students; and

(iii) quantifiable and nonquantifiable beneficial impacts on public health and worker and student performance.

**SEC. 402. AUTHORIZATION OF APPROPRIATIONS.**

(a) FEDERAL DEMONSTRATION PROJECT.—There is authorized to be appropriated to carry out the Federal demonstration project described in section 401(b)(1) $5,000,000 for the period of fiscal years 2005 through 2010.

(b) UNIVERSITY DEMONSTRATION PROJECTS.—There is authorized to be appropriated to carry out the university demonstration projects described in section 401(b)(2) $10,000,000 for the period of fiscal years 2005 through 2010.

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